

REMARKS/ARGUMENTS

Claims 1-18 are pending. Claims 1-17 were rejected as failing to comply with the enablement requirement. Claims 1-3, 5-9, and 11-18 were rejected as anticipated by U.S. Patent No. 5,275,287 to Thompson. Claims 1-3, 5-9, and 11-18 were rejected as anticipated by U.S. Patent No. 4,489,845 to Aichinger et al. Claims 4 and 10 were rejected as unpatentable over Thompson or Aichinger.

As an initial matter, the text of the Detailed Action indicates the Office Action is a final Office Action. However, the Summary indicates the Office Action is non-final, and in PAIR the Office Action is indicated as non-final. Accordingly, Applicant has assumed that the Office Action is non-final.

The Enablement Issue

Applicant respectfully disagrees that the enablement requirement is not complied with. The Office Action states that "it is not possible to exert a bending moment in order to limit deformation of the closure, because 'exerting a bending moment' to the closure would be considered as deforming the closure."

The Examiner is correct that in general, exerting a bending moment on a structure would tend to deform the structure. However, the bending moment referred to in the claims is exerted on the closure in a direction opposite to a bending moment exerted by internal pressure within the container. This is explained in the specification with reference to Figure 5. Beginning at line 4 of page 12, the specification explains that the internal pressure tends to cause the top panel of the closure to bulge outwardly as shown at X' in Figure 5. Such deformation is limited by the closure of the claimed invention by virtue of the shape and positioning of the annular sealing stop 14. More particularly, the substantial thickness of the material of the annular stop 14 prevents the diameter of the closure in this region from decreasing as a result of the internal pressure. Thus, the resistance to diameter reduction in effect exerts a bending moment **M** on the top panel of the closure that is opposite to the bending moment exerted by internal pressure. This

bending moment **M** limits deformation of the top panel by counteracting the bending moment exerted by the internal pressure.

Persons of ordinary skill in the art would clearly understand from the specification how to make and use a closure having such deformation-limiting characteristics—namely, by providing the thick annular stop **14**. Furthermore, Applicant has made clarifying amendments to the independent claims with regard to the deformation-limiting action of the second sealing element's annular stop. For these reasons, Applicant respectfully submits that the invention of Claims 1-17 is enabled by the disclosure, and requests withdrawal of the rejections under 35 U.S.C. 112, first paragraph.

Prior Art Rejections

Thompson discloses a closure having eight circumferentially spaced stops **43** formed between the top and the skirt of the closure, projecting into the annular gap between the thickened part of the skirt and the sealing portion. Each stop **43** has an angular extent of 5° (col. 2, lines 35-38). Thus, collectively the stops cover only 40° of the full 360° circumference, and they are spaced 45° apart. Their function is merely to act as stops preventing the closure from being screwed onto the container excessively.

Thompson does not disclose or suggest an *annular* stop. The eight spaced stops **43** cannot resist reduction in diameter of the closure in the region of the stops and thus cannot exert a bending moment on the top panel of the closure in order to limit deformation of the top panel of the closure, as in the invention of Claims 1, 12, and 18. As an analogy, a continuous beam can have substantial bending stiffness, but eight spaced beam segments occupying the same total length would have drastically less bending stiffness. Thus, Thompson does not anticipate or render obvious the invention of Claims 1, 12, and 18.

Aichinger discloses a closure having a great elasticity to improve sealing. The cap top has elasticity so that this produces a reduction in diameter of the closure particularly in the outer area, eliminating a clearance *a* (Figure 1) between the closure

and neck. The comparison between Figure 1 (closure undeformed) and Figure 2 (closure screwed onto the container and deformed) of this patent clearly illustrates the deformation that occurs. Aichinger describes an example at column 4, in which the outer diameter C of the closure prior to screwing it onto a container was 30.5 mm, but after screwing the closure onto the container the outer diameter C1 was 30.1 mm. Furthermore, because of the great elasticity of the top panel of the closure, it is believed that internal pressure of the container contents on the top panel would further bulge the top panel outwardly and further reduce the diameter of the closure.

In this regard, it is important to note that the closure of the claimed invention works contrarily, in that the second sealing element exerts a bending moment on the top panel of the closure to resist its deformation. The annular stop of the second sealing element resists reduction in diameter of the closure and thereby exerts such a bending moment to counteract the internal pressure's bending moment.

Aichinger does not disclose or suggest a closure as claimed in Claims 1, 12, and 18. Indeed, Aichinger teaches away from providing such a closure. Thus, these claims are not anticipated or rendered obvious by Aichinger.

Additionally, with regard to Claim 18, the third sealing element is recited as having a lower surface facing away from the first portion, the lower surface of the third sealing element being positioned to be *contacted by the container neck* when the closure is applied thereto. In contrast, Aichinger's third sealing element 5 has a lower surface facing away from the first portion 4 that is not contacted by the container neck (see Figure 2). Instead, the radially inwardly facing surface of the sealing element 5 is what contacts the container neck. For these further reasons, Claim 18 is not anticipated or rendered obvious by Aichinger.

For the above reasons, Applicant respectfully submits that the cited references do not teach or suggest the invention defined in the present claims.

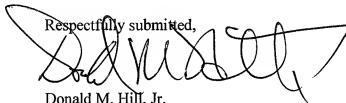
Appl. No. 10/690,714
Amdt. Dated May 16, 2006
Repy to Office Action of February 16, 2006

Conclusion

Based on the above amendments and remarks, it is respectfully submitted that the application is in condition for allowance.

It is not believed that extensions of time or fees for net addition of claims are required, beyond those that may otherwise be provided for in documents accompanying this paper. However, in the event that additional extensions of time are necessary to allow consideration of this paper, such extensions are hereby petitioned under 37 CFR § 1.136(a), and any fee required therefor (including fees for net addition of claims) is hereby authorized to be charged to Deposit Account No. 16-0605.

Respectfully submitted,

A large, stylized handwritten signature in black ink, appearing to read 'Donald M. Hill, Jr.', is written over the typed name.

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